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AUTHOR Hall, William S.; Tirre, William C.
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ABSTRACT

The research reported here focuses on one aspect of the communicative environment, namely vocabulary. The central question motivating this research was whether there are social class and ethnic group differences in the vocabulary used in the home and in the school situation. A corpus of talk was searched for the use of words from four standardized intelligence tests: Stanford-Binet, WISC-R, WPPSI, and Peabody. The number of different words that speakers used in the home and in the school situations was the dependent variable. Subjects were 36 children, aged 4 1/2 to 5 years, and their teachers and parents. Race and social class were the independent variables. Results showed that the school communicative environments of children from different social class and ethnic backgrounds did not differ in any significant way. The home communicative environments did differ along social class lines. (Author/TJ)

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Technical Report No. 125

THE COMMUNICATIVE ENVIRONMENT OF YOUNG CHILDREN: SOCIAL CLASS, ETHNIC, AND SITUATIONAL DIFFERENCES

William S. Hall and William C. Tirre
University of Illinois at Urbana-Champaign

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University of Illinois
at Urbana-Champaign
51 Gerty Drive
Champaign, Illinois 61820

Bolt Beranek and Newman Inc.
50 Moulton Street
Cambridge, Massachusetts 02138

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Abstract

The research reported here focuses on one aspect of the communicative environment, namely vocabulary. The central question motivating this research was: Are there social class and ethnic group differences in the vocabulary used in the home and in the school situation? A corpus of talk was searched for the use of words from four standardized intelligence tests: (a) The Stanford-Binet; (b) The WISC-R; (c) The WPPSI; and (d) The Peabody. The number of different words that speakers used in the home and in the school situations was the dependent variable. Thirty-six children ages 4½ to 5 and their teachers and parents were the subjects. Race and social class were the independent variables. Our results show that the school communicative environments of children from different social class and ethnic backgrounds did not differ in any significant way. The home communicative environments did differ along social class lines.

The Communicative Environment of Young Children: Social Class, Ethnic, and Situational Differences

It is widely believed that there are social class, ethnic, and situational differences in the communicative environments of children from various groups in the U.S.A. (cf. Labov, 1970; Hall & Freedle, 1975). The idea of differences in the communicative environment of children is often given as one explanation of the educational difficulties children from non-mainstream backgrounds have in school (cf. Bernstein, 1971). Empirical support for this explanation is, however, very thin. There are at least three reasons for this: (a) the situations used to evaluate language have been quite restricted; they have revolved primarily around language as used in schools; (b) there is ambiguity about the terms "Function" and "use"--for example, with respect to whether or not these constructs should be approached from the perspective of communication, cognition, or strictly social parameters; and (c) the primary emphasis in recent work has been on context and structure.

The current research was undertaken to address this issue. It focuses on one aspect of the communicative environment, namely vocabulary. The central question motivating this research was: Are there social class and ethnic group differences in the vocabulary used in the home and in the school situation? Several specific questions follow from this overall question, and were also addressed in the present study. The specific questions are:

1. Do the home environments of children of different ethnic and social class backgrounds differ in the vocabulary that parents typically use?
2. Do the school environments of children of these different groups differ in the vocabulary that teachers typically use?
3. How does the vocabulary used by children differ across situation (home vs. school) for the different ethnic and social class groups?

The issue of ethnic and social class differences in the communicative environment was sparked by concern over the last ten years about language performance and competence of lower class children, particularly as these related to school language problems. One explanation of difference in performance has been that lower class children acquire less language than middle class ones, either as a result of inherited or environmental factors. The second explanation is that lower class children acquire a different language than middle class ones. A prolific literature in sociolinguistics and psycholinguistics has grown around these issues (cf. Baratz, 1969; Hall & Freedle, 1973, 1975; Hall, Cole, Reder, & Dowley, 1977; Labov, 1972).

Whichever interpretation one chooses, it is a fact that wide social class differences in vocabulary have been reported. The difference is not that lower class children do not use a great many words, but that many of these are not capitalized on by the schools.

The need for a more precise formulation of language differences has motivated the search for an explanatory variable that supersedes existing ones. Such a variable is situation. Situation as a variable has an active

recent history in psychology. It has been studied in terms of the following characteristics: (a) topic fluency spontaneity (Strandberg, 1969; Strandberg & Griffith, Note 1; Williams & Navemore, 1969; Berlyne & Frommer, 1966), (b) length and complexity of topic (Strandberg & Griffith, Note 1; Labov, Cohen, Robins, & Lewis, 1968; MacKay & Thompson, 1968), (c) context or style in topic (Labov, 1970), (d) topic and task (Heider, Cazden, & Brown, 1968; Brent & Katz, Note 2; Dore, 1977; Hall & Cole, 1978), (e) length and complexity in topic and task (Cazden, 1967; Lawton, 1968; Cole, Dore, Hall, & Dowley, 1978), (f) content on style in task and situation (Hall & Cole, 1978), (g) listener and the situation (Labov, 1968; (h) interaction and situation (McDermott & Hall, 1977; Mehan, 1979).

A careful reading of the work referenced above clearly indicates situational differences in the way children perform on language tasks. All of these studies focus on what might be called "internal aspects" of situations as they affect language, e.g., how the topic of conversation helps to construct a situation where children are for instance more fluent, spontaneous, lengthy, complex, etc.

Recent work on situation has focused on the situation as setting and how this structures the language children use. An example of this kind of research is a recent study reported by Cole, Dore, Hall, and Dowley (1978). They report two studies in which the speech of 3 to 4 year old, Black Head Start children was compared to two situations: a trip to a local supermarket and discussion about the trip upon their return to the classroom. Comparisons were carried out using a method of speech-act analysis developed by Dore (1977) as a supplement to more standard psycholinguistic

measures of language development. The data from one study showed that speech in the two situations was markedly different, but the differences appeared at different levels of data aggregation depending upon the age of the children. Differences were found in the frequency with which different speech acts were used in the two settings. A shift in quality of talk between the supermarket and classroom situations was not obtained in the second study. The findings from both studies were interpreted as illustrating the way in which participants' constructions of the task constrain their talk and the inferences regarding language use that different situations make in speech.

The Current Research

The research to be reported here, while addressing social class and ethnic group differences was focused more directly on the situation variable. The research involved searching a corpus of talk (approximately 280 hours) for the use of words from standardized intelligence tests: (a) The Stanford-Binet; (b) The WISC-R; (c) The WPPSI; and (d) The Peabody. The index of measurement was the number of different words that a speaker used in the home and in the school situations.

The subjects for this research were 36 children between the ages of 4½ and 5 years of age. In addition to the child subjects, the study also included the parents of the children and their teachers.

We selected as our dependent measure the number of different target words produced by the individual in a standard period of time. The target words in this case were those that appear in the vocabulary sections of

children's standardized intelligence tests. The data thus allow us to test the implicit assumption made by test manufacturers that language usage does not vary across distinct cultural groups in the U.S., and hence, that opportunities to learn and use these words are uniform.

The target subjects in this study were families participating in a large naturalistic study of language function and use. Altogether 40 families were studied. Twenty of the families were White and 20 were Black. In each racial group one-half of the families were middle class and the other half were lower class. Social class was determined by use of a scale developed for this purpose by Warner, Meeker, and Ells (1949). The 4½-5 year old child was the main target in each family. Recordings were made in 10 different temporal situations: before school, on the way to school, transition to the classroom, free play, directed activity, toileting/snacks, on the way home from school, before dinner, dinner, and before bed. The children wore radio-microphones. The recording encompassed a two-day period. The two days were back-to-back and covered approximately seven hours. Thus, the basic data are naturally occurring conversations. Although the adults did not wear microphones, a second microphone worn by the field worker provided an extra channel which picked up their talk.

For purposes of analysis, adult and child data were separated. We now turn to the results of our analysis.

Results

Analysis of Adults' Data

An analysis of variance was performed in which race of child, class of child, and relationship of adult to child were between subject factors with two levels each. Table 1 displays the mean number of different target vocabulary words produced by teachers and parents of children of different race and social class memberships. Table 2 displays the means broken down by class and relationship of adult, and Table 3 displays the same broken down by race and class. From inspection of these means, there appear to be differences in mean target word production between significant adults of Black and White children, 13.14 vs. 15.78, respectively; and between parents and teachers, 16.81 vs. 12.11, respectively. Analysis of variance shows that these differences are reliable; race, $F(1,64) = 7.14$, $p < .01$; class, $F(1,64) = 5.71$, $p < .02$; and teacher/parent, $F(1,64) = 22.59$, $p < .001$.

Insert Tables 1-3 about here.

However, the presence of significant interaction effects for race by relationship, $F(1,64) = 6.55$, $p < .015$; and for class by relationship, $F(1,64) = 9.40$, $p < .005$, places some qualifications upon the effects of race, class, and relationship. Simple effects tests show that the difference between adults of Black and White children is limited to the home situation (14.22 vs. 19.39), $F(1,64) = 13.68$, $p < .001$. It is also the case that the home/school difference is true only for White target children

(19.39 vs. 12.17), $F(1,64) = 26.73$, $p < .0001$, though the effect approached significance for parents vs. teachers of Black children, $F(1,64) = 2.41$, $p < .15$.

Simple effects tests involving class show that adults of middle class children produced more target words than adults of lower class children only for the home situation (19.45 vs. 14.11), $F(1,64) = 14.88$, $p < .001$. It also appears that the home/school difference is true only of the middle class, $F(1,64) = 30.56$, $p < .001$ with parents producing more target words than teachers (19.5 vs. 11.78).

Thus, the results appear to be consistent with our expectations. There were few differences among the teachers of children from different social class and racial backgrounds, the observed range being 11.44 to 12.89 target words produced. The parents of the children showed a different pattern of results. Middle class parents produced more target words than lower class parents and they also produced more target words than did the teachers of their children. Parents and teachers of lower class children were not significantly different in vocabulary used. Race interacted only with relationship, where White parents produced more words than did Black parents. Contrary to expectations, race did not enter into any other significant interactions; race by class, $F(1,64) = 1.8999$, $p < .18$; and race by class by relationship, $F < 1$. The predicted pattern of means was observed, however, where the Black/White difference was smaller for middle class parents (17.889 vs. 21.111), than for lower class parents (10.555 vs. 17.667).

Analysis of Children's Data

An analysis of variance was performed where race and class were between subject factors and situation (home vs. school) was a within subjects factor. The dependent measure was the same as the adults', namely, the number of different target vocabulary words produced in a standard period of time.

The mean number of different target words produced broken down by race, class, and situation is displayed in Table 4. Table 5 displays the means broken down by class and situation, and Table 6 displays the same

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Insert Tables 4-6 about here.

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broken down by race and class. Overall, there are no differences between Black and White children in mean number of target vocabulary words produced 11.278 vs. 11.083, respectively, $F(1,32) = .07$. Nor is there a main effect of class; the lower class children produced a mean of 10.92 words while the middle class children produced a mean of 11.444 words, $F(1,32) = .527$. There was, however, an interaction effect between class and situation, $F(1,32) = 6.07$, $p < .02$, suggesting that class differences relate to the situation. Simple effects tests show that middle class children produce more words at home than do lower class children, $F(1,32) = 4.84$, $p < .05$, but that there are no differences at school, $F(1,32) = 1.27$, $p < .05$.

Overall, there is a main effect of situation, $F(1,32) = 47.49$, $p < .00001$, where children produce less vocabulary words at school than at home, 8.89 vs. 13.47, respectively. All other effects, namely the race by

class, the race by situation, and the race by class by situation interaction effects are non-significant.

Thus, the results of this analysis of the children's data argue that few differences exist between children of different social class and racial backgrounds in vocabulary used in the school situation. In the home situation, social class differences were found, where middle class children produced more vocabulary words than do lower class children. In no case did race play an important role, either individually or in combination with another variable.

Summary/Discussion

We began this paper with the assumption that situational differences would be found in the vocabulary used in the ongoing conversations of adults and children. We also assumed that such differences would be related to racial group membership and social class. The assumptions here have a long history in cognitive social science. The history revolves around the link between language and thought. Our interest here is based on the belief that vocabulary differences clearly reflect differences in public access to one's idea. These differences lead to different opportunities to talk about a given meaning or aspect of meaning. As a consequence of this state of affairs, members of a given speech community will have easier access to ideas expressed within their community than to ideas expressed outside of their speech community.

The assumptions above also have a history in applications to education. It is widely held that because of social class, and ethnic differences in such characteristics as vocabulary, some children have

difficulty in navigating lessons in the school situation. The evidence for such a belief is thin. It is hoped that our results shed some light on both the applied concerns and the historically theoretical ones in cognitive social science. Our findings clearly suggest situational differences in the home communicative environments of children from various social classes as indexed by vocabulary. Race alone was not found to have any significant effect on children's language usage. For the children's data, social class and situation interacted where middle class children out performed lower class ones at home. This was not so for school where no differences appeared. But, overall, situational differences were found in that children produced more of the words under investigation at home than at school.

With regard to adults, teachers of children from the various social class and ethnic backgrounds did not differ significantly from each other in their production of the target words. We have no clear explanation for this finding. We might proffer though that this finding is due to the fact that the task of teaching nursery school is similar for classrooms of children of different backgrounds, and that the teachers in our sample had similar educational backgrounds.

When we turned to the parents, however, differences appeared. In short, middle class parents produced more of the target words than did parents from the lower class. This finding lends support to an hypothesis prevalent in some quarters of our culture, namely, that in many instances, standardized test items appear to differentially reflect social class experience.

The belief that social class and ethnic group membership differences in such characteristics as vocabulary impede some childrens' navigation in the school situation is warranted by our data. This is, however, no simple matter. Teachers of children of different backgrounds do not appear to be different in the vocabulary they use while teaching. Similarly, children of different backgrounds do not appear to be different in the vocabulary used while at nursery school. But, as our data suggest, the home situations of children are different according to social class. Since lower class children are exposed to different communicative environments in the home, it stands to reason that they present a different set of communicative experiences to the school than do middle class children. The fact that this difference occurred in our data suggests to us the following: (a) the isomorphism between the items on the four standardized vocabulary tests used and middle class home communicative environments; and (b) the lack of sensitivity of these measures to the particular variety of language used in lower class homes.

Reference Notes

1. Strandberg, T. E., & Griffith, J. A study of the effects of training in visual literacy on verbal language behavior. Unpublished manuscript, Eastern Illinois University, 1968.

2. Brent, S. G., & Katz, E. W. A study of language deviations and cognitive processes (Progress Rep. No. 3). Detroit: Wayne State University, DEO Job Corps Contract 1209, 1967.

References

Baratz, J. C. A bidialectal task for determining language proficiency in economically disadvantaged children. Child Development, 1969. 40, 889-901.

Berlyne, D. E., & Frommer, F. D. Some determinants of the incidence and content of children's questions. Child Development, 1966, 37, 177-189.

Bernstein, B. Class, codes and control (Vol. 1): Theoretical studies towards a sociology of language. London: Routledge and Kegan Paul, 1971.

Cazden, C. B. On individual differences in language competence and performance. Journal of Special Education, 1967, 1, 135-150.

Cole, M., Dore, J., Hall, W. S., & Dowley, G. Situation and task in young children's talk. Discourse Processes, 1978, 1, 119-176.

Dore, J. Children's illocutionary acts. In R. Freedle (Ed.), Discourse production and comprehension. Hillsdale, N. J.: Erlbaum, 1977, 227-244.

Hall, W. S., & Cole, M. On participant's shipping of discourse through their understanding of the task. In K. Nelson (Ed.), Children's language. New York: Gardner Press, 1978.

Hall, W. S., Cole, M., Reder, S., & Dowley, G. Variation in young children's use of language: Some effects of setting and dialect. In R. O. Freedle (Ed.), Discourse processes: Advances in research and theory (Vol 1). Norwood, N.J.: Ablex, 1977.

Hall, W. S., & Freedle, R. O. A developmental investigation of standard and nonstandard English among black and white children. Human Development, 1973, 16, 440-464.

Hall, W. S., & Freedle, R. O. Culture and language. New York: Halstead Press, 1975.

Heider, E. R., Cazden, C. B., & Brown, R. Social class differences in the effectiveness and style of children's coding ability (Project Literary Rep. No. 9). Ithaca, N. Y.: Cornell University, 1968.

Labov, W. The logic of non-standard English. In F. Williams (Ed.), Language and Poverty. Chicago: Markham, 1970.

Labov, W. Language in the inner city. Philadelphia: University of Pennsylvania Press, 1972.

Labov, W., Cohen, P., Robins, C., & Lewis, J. A study of the non-standard English of Negro and Puerto Rican speakers in New York City (Final Rep. No. 3288). Columbia University, Cooperative Research Project, 1968, (2 volumes).

Lawton, D. Social class, language and education. New York: Stocken, 1968.

MacKay, D., & Thompson, B. The initial teaching of reading and writing: Some notes toward a theory of literacy (Paper #3). London: University College and Longmiths Green, Program in Linguistics and English Teaching, 1968.

McDermott, R., & Hall, W. S. The social organization of a successful and an unsuccessful school performance. The Quarterly Newsletter of the institute for Comparative Human Development, 1977, 1(3).

Mehan, H. Learning Lessons. Cambridge, Mass.: Harvard University Press, 1979.

Strandberg, T. An evaluation of three stimulus media for evoking verbalizations from preschool children. Unpublished master's thesis, Eastern Illinois University, 1969.

Warner, W. L., Meeker, M., & Ells, K. Social class in America. Chicago: Science Research Associates, 1949.

Williams, F., & Navemore, R. C. On the functional analysis of social class differences in modes of speech. Speech Monographs, 1969, 36, 77-102.

Table 1

Mean Number of Words Produced by Significant Adults,

Broken Down by Race and Class of Target Child

Class/Race	Parent		Teacher	
	M	SD	M	SD
Middle Class				
Black	17.89	4.59	12.11	4.31
White	21.11	7.22	11.44	2.45
Lower Class				
Black	10.55	3.39	12.00	1.66
White	17.67	4.21	12.89	3.26

Table 2

Mean Number of Vocabulary Words Produced by Significant Adults Broken Down by Class

Class	Parents		Teachers	
	M	SD	M	SD
Middle Class	19.50	6.10	11.78	3.42
Lower Class	14.11	5.21	12.44	2.55

Table 3

Mean Number of Vocabulary Words Produced by

Adults Broken Down by Race and Class of Child

Class	Significant Adults of Black Children		Significant Adults of White Children		Total Mean
	M	SD	M	SD	
Middle Class	15.00	5.250	16.28	7.22	15.64
Lower Class	11.28	2.697	15.28	4.40	13.28
Total	13.14		15.78		14.46

Table 4

Mean Number of Different Vocabulary Words Produced by Children Broken Down by Race, Class, and Situation

Class/Race	Home		School	
	M	SD	M	SD
Middle Class				
Black	14.44	2.55	7.89	3.41
White	14.67	4.90	8.78	1.86
Lower Class				
Black	12.11	2.41	10.67	1.50
White	12.67	3.08	8.22	2.59

Table 5

Mean Number of Different Vocabulary Words Produced by Children Broken Down by Class and Situation

Class	Home		School	
	M	SD	M	SD
Middle Class	14.56	2.79	8.33	2.70
Lower Class	12.39	2.70	9.44	2.41

Table 6

Mean Number of Different Vocabulary Words Produced by Children Broken Down by Race and Class

Class	Black Children		White Children	
	M	SD	M	SD
Middle Class	11.17	4.46	11.72	4.70
Lower Class	11.39	2.09	10.44	3.59

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